



LONG LIFE BULBS..... THE FACTS

What is a light bulb?

All light bulbs have filaments through which electric current is passed. This electric current heats the filament and causes it to glow. As it glows the material of the filament evaporates and is deposited inside the glass of the bulb. This deposited material then cuts down the amount of light allowed to escape from the bulb.

The thinner the filament the more it glows and the higher the light output. However the more it glows the faster it evaporates, the faster the light output reduces and the faster the bulb fails.

Standard light bulbs normally last about 1000 hours at 240 volts.

How do you make long life?

Long life light bulbs are made with thicker filaments and contain various materials to minimise the rate of evaporation of the filament. This dramatically increases the time taken for the filament to evaporate extending the life of the bulb. This reduces the initial light output but, because of this there is less material deposited on the glass the light output remains constant for a long time.

All light bulbs are fragile

All light bulbs are fragile and do not survive rough treatment. This particularly true for standard bulbs where the filament is thin and not well supported. Long life bulbs are much more robust, due to their thicker, stronger filament and because of the way the filament is supported (for example 16,000 hour GLS bulbs have 9 supports compared to the 3 of a standard bulb). Vibration kills all light bulbs eventually, even long life ones.

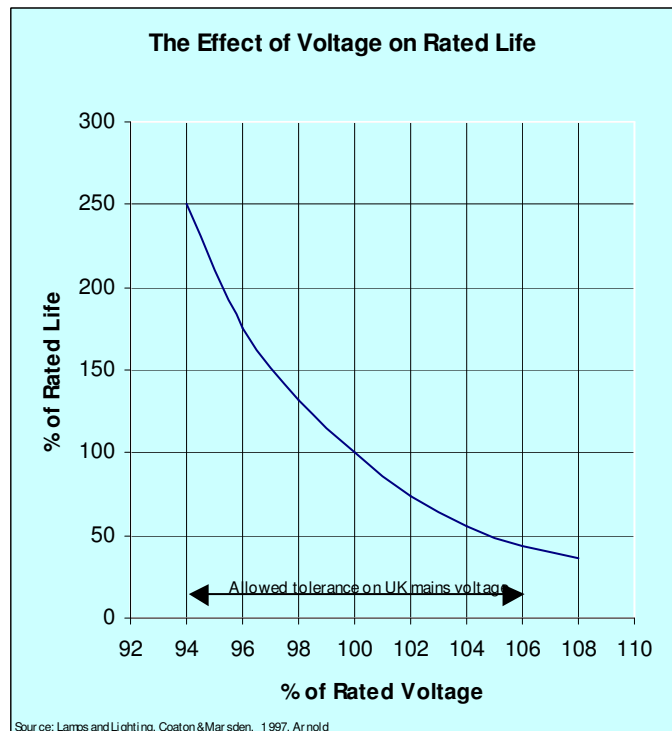
Voltage supply is critical

Light bulbs are very sensitive to their supply voltage. All light bulbs are rated at the normal mains voltage. The electricity boards are required to keep this between +/- 6%. As you can see from the graph the +6% can reduce bulb life by more than half... this is true for all bulbs whether standard or long life. The only thing that is sure is that long life bulbs will last much longer than standard bulbs in the same conditions.

Other Factors

Several other factors can greatly reduce bulb life and include:

- **Overheating** caused by using the bulb in an inappropriate fitting or environment.
- **Faulty Fittings** can cause bad connections and arcing, again reducing bulb life.
- **Splashing liquid** on the hot glass of the bulb can cause minute cracks which allow the gasses to escape, causing failure.



Do's and Don'ts

Light bulbs are fragile and common sense must be applied both in their use and their handling. We recommend that the following are considered carefully:

Standard and Long Life bulbs should not be mixed in the same fitting because of the different light outputs and differing reduction in light outputs with time.

Do treat your light bulbs carefully, particularly in transit and during installation.

Always switch off the mains voltage before installation or removal of your light bulbs.

If you are losing bulbs frequently, whether standard or long life, have your supply checked by a professional electrician. You may be in a high voltage area or on a supply which is subject to voltage surges.



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